

Bassaricyon gabbii Allen, 1876 (Carnivora: Procyonidae): New distribution point on western range of Colombian Andes

Carlos Arturo Saavedra-Rodríguez^{1,2} and Jorge H. Velandia-Perilla¹

¹ Universidad del Valle, Departamento de Biología, Grupo de Investigación en Ecología Animal. Calle 13 # 100-00, Sede Meléndez. A.A 25360, Cali, Colombia.

² Wildlife Conservation Society Colombia Program, Carrera 25 # 4 – 39, Cali, Colombia.

* Corresponding author. E-mail: casaavedrar@yahoo.com

ABSTRACT: A new distribution point for the bushy-tailed olingo (*Bassaricyon gabbii*) was documented based on a specimen found in the forest on the eastern slope of the western range of the Colombian Andes (El Duende Regional Reserve, Valle del Cauca). The location where the animal was found had features similar to those where the species has been previously documented. We extend the known the species distribution to the western range of the Colombian Andes, both versants of the interandean valley of the Cauca River in Colombia and its elevation distribution up to 2200 m asl. Additional surveys are necessary to evaluate the conservation status of olingo populations into this protected area.

The genus *Bassaricyon* (Carnivora: Procyonidae) includes five species (Honacki *et al.* 1982; Eisenberg 1989; Emmons 1990; Decker and Wozencraft 1991; Wozencraft 2005). All these species are commonly called olingos, but herein we use the common name olingo to refer specifically to the bushy-tailed olingo (*Bassaricyon gabbii* Allen, 1876). The olingo is native to the rainforests of Central and South America, present from Nicaragua to Peru (Eisenberg 1989; Emmons and Fee 1997; Ordóñez *et al.* 1999-2000, Wozencraft 2005; Prange and Prange 2010).

Although it has not been listed as an endangered species, being classified as a species of Least Concern by the International Union for Conservation of Nature and Natural Resources (Reid and Helgen 2008), it is threatened by deforestation, hunting, and the pet trade (Glaston 1994). Olingos are arboreal and nocturnal, and live at elevations from 1,600 to 2,000 m (Prange and Prange 2010) where they typically occur near water in evergreen forests and forest edges, preferring the upper canopy (Redford and Stearman 1993; Pontes and Chivers 2002). They are primarily frugivorous, but may occasionally feed on insects and small vertebrates (Kays 2000; Pontes and Chivers 2002; Prange and Prange 2010).

The olingo is brown or grayish brown dorsally being darker along the center of the back. Its ventral side is a lighter cream color. Ears are short and rounded, and its tail is long, bushy and non-prehensile. Legs are short with short, non-retractable claws. Weight is usually 1.2-1.4 kg; length of head-body is 360-420 mm, with a tail of 380-480 mm. Olingos are similar to the kinkajou (*Potus flavus*) in morphology and habits, and consequently they are often misidentified as kinkajous, although compared with kinkajous they lack prehensile tails, have more extended muzzles, and possess an anal scent gland. *Bassaricyon gabbi*, compared with the other congeneric species, is the particularly well-studied, but many aspects concerning its ecology and biology are still unknown due to the difficulty in finding and monitoring these animals.

Although the geographic range of the olingo has been described as extending west of Colombia, records from this country have been obtained mainly in the northern, central and southeastern regions (Patterson *et al.* 2005; Reid and Helgen 2008). The species has been reported in the Amazonian, Andean, Pacific and Llanos regions, in the political administrative Departments of Antioquia,

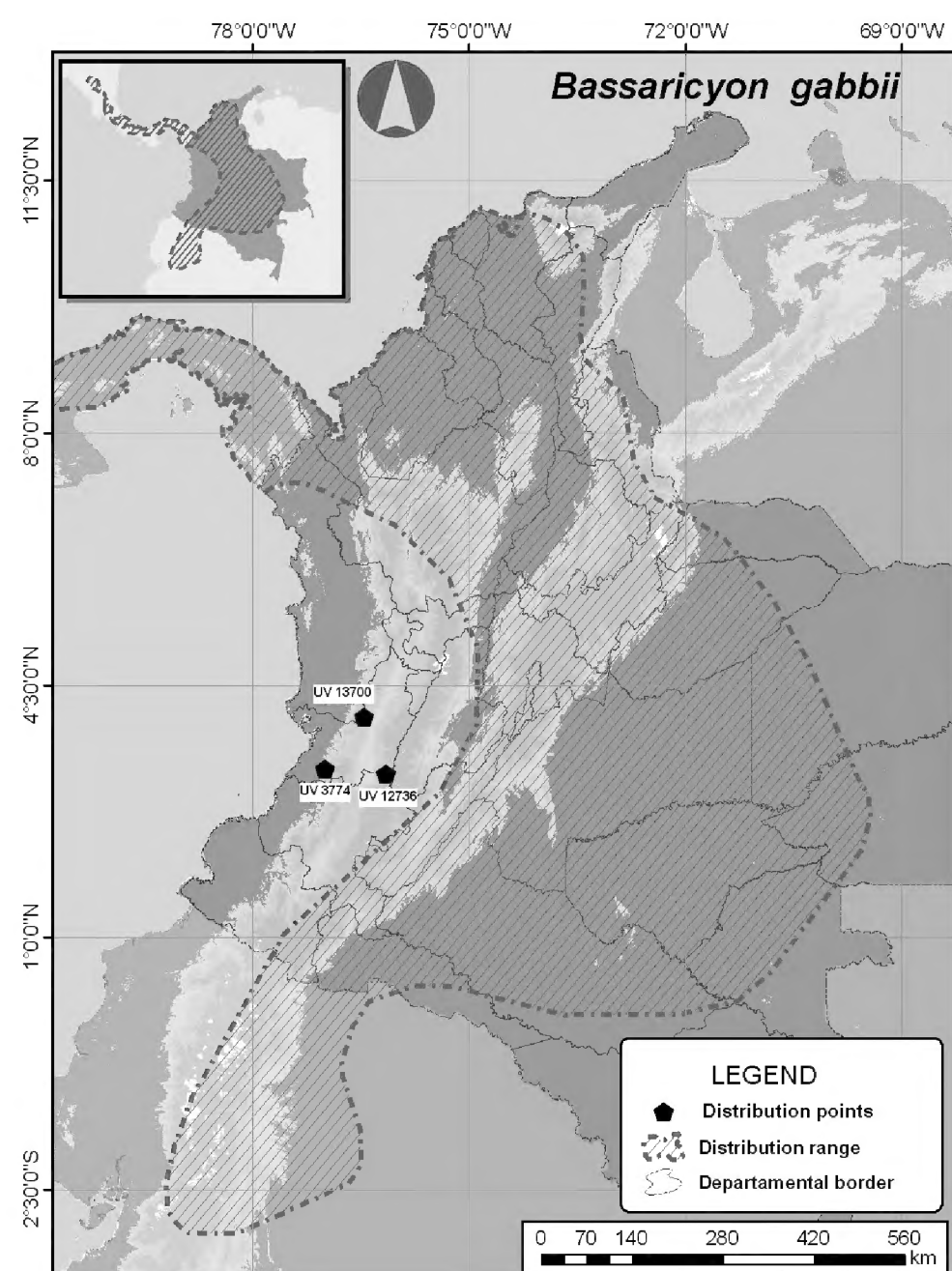


FIGURE 1. Geographic distribution of *Bassaricyon gabbii* and, the distribution points on the Valle del Cauca Department and western range of the Andes of Colombia.

Boyacá, Guaviare, Meta and Santander (Alberico *et al.* 2000; Cuartas and Muñoz-Arango 2003). The reports from the pacific and/or western range of the Andes are from the northern region, where the geographic range continues into Central America.

During October 2009, we found an olingo carcass on the ground within the buffer zone of the El Duende Regional Reserve (2,200 m asl; 04°02'55.6" N, 76°27'28.4" W), Rio Frio Municipality, Valle del Cauca Department, eastern slope of the western range of Colombian Andes (Figure 1). The carcass was in a state of advanced decomposition, and it was not possible to save the skin, but the skull was collected. This specimen was identified and deposited in the mammal collection of the Universidad del Valle, Cali, Colombia (UV-13700; Figure 2).

The documentation of the olingo specimen in El Duende Regional Reserve, along with data from museum specimens deposited at the Universidad del Valle from different locations and elevations of the central Andean range (Los Alpes, Florida, 2250 masl, Valle del Cauca, UV-12736; Figure 2) and both slopes of western range of the Andes (Río Agua Sucia, Río Cajambre, 725 m asl, UV-3774; Fig. 2) confirm the presence of the species in the Valle del Cauca Department; besides, Muñoz-Saba and Alberico

(2004) listed the species in the Chocó Biogeográfico of this Department. Therefore, the geographic range of the olingo may be extending up to 2,200 m asl and may include the entire pacific slope of the western Andes and both versants of the interandean valley of the Cauca River in Colombia. However, because of the fragmented nature of the forested landscape in the region, actual documentation of occupancy remains very important.

We believe frequent misidentification of olingos as kinkajous is at least part of the cause for the absence of olingo documentation in this region in the past. In addition, El Duende Regional Reserve has not been well studied. Although research on a number of vertebrate groups in the Reserve has resulted in significant contributions to our understanding of tropical species, knowledge of medium-sized, nocturnal mammals is still poor. There is a significant amount of knowledge among local human inhabitants in the region that could be useful in filling gaps about the ecology and distribution of these species. In particular, older local hunters are an important source of information that may help to complete our knowledge concerning the distributions of species, particularly, medium-sized mammalian carnivores.



FIGURE 2. Olingo (*Bassaricyon gabbi*) specimen from the eastern slope of the western range of the Andes, Valle del Cauca Department, Colombia.

ACKNOWLEDGMENTS: Financial support was provided by CVC (the regional environmental authority of the Valle del Cauca Department), FEDENA (Fundación Ecológica Fenicia Defensa Natural) and WCS-Colombia (Wildlife Conservation Society Colombia Program). Fieldwork was made using equipment donated by IdeaWild to CASR. Thanks to V. Rojas-Díaz for confirming the identification of the specimen and for his significant contribution in the text. W. Aranzasu and W. Arias collaborated during the survey in the El Duende Regional Reserve. Suzanne Prange, Ph.D. and an anonymous referee for their commentaries and help to improve the manuscript. C. Ríos-Franco helped us with the elaboration of the map. CASR is a doctoral student in the Biological Sciences Postgraduate Program of the Universidad del Valle (Cali) supported by COLCIENCIAS funds for doctoral-level education in Colombia.

LITERATURE CITED

- Alberico, M., A. Cadena, J. Hernández-Camacho and Y. Muñoz-Saba. 2000. Mamíferos (Synapsida: Theria) de Colombia. *Biota Colombiana* 1: 43-75.
- Cuartas, C.A. and J. Muñoz-Arango. 2003. Lista de los mamíferos (Mammalia: Theria) del Departamento de Antioquia, Colombia. *Biota Colombiana* 4: 65-78.
- Decker, D.M. and W.C. Wozencraft. 1991. Phylogenetic Analysis of Recent Procyonid Genera. *Journal of Mammalogy* 72: 42-55.
- Eisenberg, J.F. 1989. *Mammals of the Neotropics. Panamá, Colombia, Venezuela, Guyana, Suriname, French Guiana* Vol 1. *The Northern Neotropics*. Chicago: The University of Chicago Press. 449 p.
- Emmons, L.H. and F. Feer. 1997. *Neotropical Rainforest Mammals: A Field*

- Guide*. Chicago: The University of Chicago Press. 307p.
- Glatston, A.R. 1994. *The Red Panda, Olingos, Coatis, Raccoons, and their Relatives. Status Survey and Conservation Action Plan for Procyonids and Ailurids*. Gland: IUCN/SSC Mustelid, Viverrid and Procyonid Specialist Group. 103p.
- Guzmán-Lenis, A.R. 2004. Revisión preliminar de la familia *Procyonidae* en Colombia. *Acta Biológica Colombiana* 9: 69-76.
- Kays, R.W. 2000. The behavior and ecology of olingos (*Bassaricyon gabbii*) and their competition with kinkajous (*Potos flavus*) in central Panama. *Mammalia* 64: 1-10.
- Muñoz-Saba, Y. and M. Alberico. 2004. Mamíferos en el Chocó Biogeográfico; p 559-597 In J.O. Rangel (ed.). *Colombia. Diversidad Biótica IV. El Chocó Biogeográfico/Costa Pacífica*. Bogotá: Universidad Nacional de Colombia, 997p.
- Ordóñez, G., T.J. McCarthy, J. Monzón, J. O. Matson, and R.P. Eckerlin. 1999–2000. Ampliación del área de distribución de *Bassaricyon gabbi* J. A. Allen, 1876 (Carnivora: Procyonidae) en el Norte de América Central. *Revista Mexicana de Mastozoología* 4: 114-116.
- Patterson, B.D., G. Ceballos, W. Sechrest, M.F. Tognelli, T. Brooks, L. Luna, P. Ortega, I. Salazar and B.E. Young. 2005. *Digital distribution maps of the mammals of the western hemisphere. Version 2.0*. Arlington: NatureServe.
- Pontes, A, and D. Chivers. 2002. Abundance, Habitat use and conservation of the olingo *Bassaricyon* sp. in Maracá Ecological Station, Roraima, Brazilian Amazonia. *Studies on Neotropical Fauna and Environment* 37: 105-109.
- Prange S. and T. Prange. 2010. *Bassaricyon gabbii* (Carnivora: Procyonidae). *Mammalian Species* 826: 1-7.
- Redford, K.H. and A.M.C. Stearman 1993. Notas sobre la biología de tres procyonidos simpátricos Bolivianos (Mammalia, Procyonidae). *Ecología en Bolivia* 21: 35-44.
- Reid, F. and K. Helgen 2008. *Bassaricyon gabbii*. In IUCN 2010. *IUCN Red List of Threatened Species. Version 2010.1*. Electronic database accessible at www.iucnredlist.org. Captured on 12 March 2010.
- Wozencraft, W.C. 2005. Order Carnivora; p. 532-628 In D.E. Wilson and D.M. Reeder (ed.). *Mammal Species of the World: A taxonomic and geographic reference*. Volume 1. Baltimore: Johns Hopkins University.
- RECEIVED: October 2010
 LAST REVISED: May 2011
 ACCEPTED: June 2011
 PUBLISHED ONLINE: July 2011
 EDITORIAL RESPONSIBILITY: Marcelo Passamani